

Lipid Management: Diabetes

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Objectives

- Review the LDL goals for diabetes patients with and without CVD
- Describe the comparative efficacy of HMG-CoA reductase inhibitors
- Review the side effects and drug interactions of HMG-CoA reductase inhibitors

Lipid Goals: Diabetes

- Without overt CVD
 - LDL < 100 mg/dl
 - Triglycerides < 150 mg/dl
 - HDL > 40 mg/dl men and > 50 mg/dl women
- With overt CVD (ATP III 2004 Update)
 - LDL < 70 mg/dl (“option”)

No CVD and Diabetes

- Heart Protection Study
 - 6,000 patients had diabetes
 - 4,000 patients had no evidence of prior CAD
 - 25% event reduction regardless of baseline LDL
- Collaborative Atorvastatin Diabetes Study (CARDS)
 - Baseline LDL < 160 mg/dl and
 - HTN, retinopathy, micro/macroglobulinuria, or smoking
 - 37% RR reduction in CV events (regardless of baseline LDL)

What does this mean?

- Patients with diabetes and
 - Over the age of 40
 - Total cholesterol \geq 135 mg/dl
- Primary LDL goal $<$ 100 mg/dl
- Achieve 30-40% reduction in LDL
 - Regardless of baseline

Overt CVD: The studies

- Heart Protection Study (HPS)
 - 40-80 years of age (men and women)
 - CHD (coronary disease, other arterial disease)
 - Ave LDL of 88 mg/dl
- PROVE-IT TIMI 22
 - ACS (MI or high risk unstable angina)
 - 19% had diabetes
 - Median LDL of 62 mg/dl

Overt CVD: The studies

- The Treating to New Targets (TNT) Study
 - previous myocardial infarction
 - previous or present angina with objective evidence of atherosclerotic CHD
 - previous coronary revascularization procedure
 - Mean LDL 77.0 mg/dl

Diabetes and Overt CVD: Treatment

- Lifestyle modification therapy
- Receive statin
- Achieve 30-40% reduction in LDL
 - Regardless of baseline

Comparative Efficacy: LDL lowering

Lovastatin (Mevacor)	Pravastatin (Pravachol)	Simvastatin (Zocor)	Fluvastatin (Lescol)	Atorvastatin (Lipitor)	Rosuvastatin (Crestor)
20 mg: 29% 40 mg: 31% 80 mg: 44%	10 mg: 19% 20 mg: 24% 40 mg: 34% 80 mg: 40%	10 mg: 28% 20 mg: 35% 40 mg: 40% 80 mg: 48%	20 mg: 17% 40 mg: 23% 80 mg: 33%	10 mg: 38% 20 mg: 46% 40 mg: 51% 80 mg: 54%	5 mg: 43% 10 mg: 50% 20 mg: 53% 40 mg: 62%

Statins and Diabetes

- Most potent LDL lowering
- Good evidence and CV outcomes
- Side effects
 - GI problems (take with food)
 - Myopathy
- Monitor
 - LFTs

Statins and Myopathy

- Prevention – Assess risk factors
 - Elderly (especially > 80)
 - Women > men
 - Renal dysfunction
 - Drug interactions (CYP 450)
 - Azoles, macrolides, HIV protease inhibitors
 - Grapefruit
 - Statin + Niacin < Statin + fibrate
 - Fenofibrate < Gemfibrozil
 - Hypothyroidism
 - Perioperative

Questions

